The appearance of the book is in every way faultless. J. Christian Bay.

Iowa State Board of Health,

SCIENTIFIC JOURNALS.

THE AMERICAN GEOLOGIST, APRIL.

Apparent Anomalies of Stratification in the Postville Well: By Samuel Calvin. A recently bored well in northeastern Iowa shows a remarkable and unusual thickness of shaly material in the St. Peter Sandstone. Caverns are frequent in this unconsolidated and easily eroded sandstone, and the author suggests that in this case a cavern was formed in the St. Peter sandstone and it was afterward filled by descending waters with material from the shaly members of the overlying Trenton.

Englacial Drift: By W. O. Crosby. In the longest paper of this number, Prof. Crosby presents a very thorough discussion of the drift which was transported in the lower part of the thick Pleistocene ice sheets, comparing them with the Malaspina Glacier and with the present ice sheet of the interior of Greenland. To designate the drift so enclosed in glaciers and ice sheets, Chamberlin proposed the term englacial, but he supposes that this part was of small amount in comparison with the drift dragged and pushed along beneath the ice as its ground moraine. Crosby shows by the almost universally glaciated surface of the bedrocks beneath the drift, excepting near the borders of the drift-bearing areas, that the ice sheet gathered into its lower part all the preglacial residuary soil and alluvium, until the base of the ice, thickly charged with englacial drift, wore into the hard underlying rocks. With the return of a warm climate, during the Champlain epoch, causing the final recession and departure of the ice, Prof. Crosby thinks that the rapid surface melting was accompanied also by much melting of the base of the ice sheet, whereby much of the previously englacial drift was deposited as subglacial till. It becomes, therefore, difficult to discriminate the finally subglacial deposits from the portion of the drift which continued to be englacial until the surface melting or ablation at last exposed it as superglacial till. The origin of the modified drift, or stratified gravel, sand and clay, brought by streams of water from the drift-laden ice, Prof. Crosby ascribes in its larger part to subglacial drainage, rather than to the superglacial streams which Upham has regarded as the chief agency of derivation of these beds during the mainly rapid final retreat of the ice.

Further examination of the Fisher Meteorite: By N. H. Winchell. Further careful study of this interesting meteorite shows that it contains considerable glass, the mineral asmanite (tridymite), and very probably the mineral maskelynite.

Preliminary Notes on Studies of the Great Lakes made in 1895: By F. B. Taylor. The author states that his explorations and studies during 1895 lead him to doubt his former reference of the high shore lines about the upper great lakes of the St. Lawrence to marine submergence attending or following the close of the Ice Age, instead of which he now concludes that probably all these shores belonged to vast lakes held by the barrier of the waning ice sheet. He asserts, however, that the glacial Lake Warren, according to his exploration of its shores, was limited to the basin of Lake Erie and the southern part of the Huron basin, outflowing by the Pewano channel, southwest of Saginaw Bay, to the glacial Lake Michigan. The very high shores around Lake Superior and the northern part of Lake Huron and Georgian Bay, he attributes to the later Lake Algonquin, with outlet by a river flowing to the south and east along the present bed of Lake Erie.

In an editorial comment by Mr. Warren Upham, referring to Mr. Taylor's paper, it is suggested that only the highest beach which had been attributed to Lake Warren in the Erie basin may represent the Pewamo outlet, and that later stages of Lake Warren, flowing past Chicago to the Des Plaines and Illinois rivers, probably formed the Arkona and Forest or upper or lower Crittenden beaches, and the high shores of the Georgian Bay region, and also of Lake Superior, excepting those of its western part belonging to an earlier glacial lake.

THE MONIST, APRIL, 1896.

Prof. Mach describes a method of using Röntgen's X-rays for obtaining stereoscopic

views of invisible objects. Two photographic shadow-pictures, say of a mouse, are obtained from two different points of view and stereoscopically combined into a solid phantom-picture, showing the skeleton, etc., in actual relief. This is simply a modification, by the use of the Röntgen rays, of Mach's old and well-known method of getting solid views of concealed anatomical structures, etc. Prof. Mach has also a few remarks to make on the physical character of the X-rays. The same subject is treated at length in a second article by Prof. Hermann Schubert, who gives an account of the methods successfully employed in the Hamburg State Laboratory. Two actinograms, one of a plaice with shells in its intestines, and one of a lady's hand, showing the position of a fragment of a needle, accompany this article.

In the third article Edward Atkinson discusses 'The Philosophy of Money.' A Polish philosopher, W. Lutoslawski, of Kazan, gives a brief sketch of the philosophy of Polish individualism.

The article 'From Animal to Man,' by Prof. Joseph Le Conte, is a contribution to comparative psychology. Considering successively speech, art, thought, imagination, consciousness and will, Prof. Le Conte tries to put his finger as nearly as he can 'on the dividing line where humanity emerges out of animality.' The abstraction of *self* from the facts of consciousness, he thinks, may be regarded as the consummation of humanity. 'The Dualistic Conception of Nature' is a contribution by Prof. J. Clark Murray, tracing the fortunes of dualistic notions in the history of philosophy and religion.

Prof. Kurd Lasswitz attacks a more difficult problem in 'Nature and the Individual Mind,' a metaphysical question of profound interest to psychologists and philosophers. Prof. Lasswitz seeks to show that there is no change of mode of existence when things physical become things mental; the difference is merely a difference of combination of elements. 'Objective and subjective are distinguished solely by their existential contents.' The opposition of object and subject is originally produced in and by knowledge, and nature itself is fashioned on lines parallel with the growth of knowledge. The doctrine of 'parallelism' which views physical and psychical phenomena as two modes of representation of the same synthesis is critically discussed, and we have also an interesting application of the psychological law of thresholds as marking the difference between nature and mind.

The last article is a discussion of the 'Nature of Pleasure and Pain,' by Dr. Paul Carus, with particular reference to the theory of Ribot. He thinks that the current views of pleasure and pain exhibit a neglect of the element of form or of the qualitative aspect of feeling. In his view the nature of a commotion is determined by its relation to the constitution and memory-structures of an organism. Pleasure is the satisfaction of a want originating in constitutional habits; pain is the felt evidence of an unsatisfied want or of any other disturbance. The author claims that this view will do away with all troublesome exceptions and inconsistencies of the old theories.

The number concludes with the usual literary correspondence and book reviews.

SOCIETIES AND ACADEMIES.

BIOLOGICAL SOCIETY OF WASHINGTON—258TH MEETING, SATURDAY, MARCH 21.

BARTON W. EVERMANN exhibited specimens of *Animals from an Artesian Well at San Marcos, Texas.* This well was sunk to obtain water for the station of the U. S. Fish Commission, and when the drill had reached a depth of 180 feet it dropped four feet, indicating the presence of a cavity. Although sunk much deeper, the well was finally closed up to a depth of 184 feet, an abundant supply of water being obtained at that level. The water flowing from the well contained a considerable number of crustaceans and a few batrachians, all blind and all new. The crustaceans comprised one species of shrimp, an isopod and a copepod. The batrachian, according to Dr. Stejneger, belonged to the Proteida, but was remarkable for the great length of its legs.

C. Hart Merriam spoke of the *Big Bears of North America*, giving the distinctive characters of the various species.

Leonhard Stejneger spoke on *The Use of*